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PRELIMINARY PARALLAX OF NOVA AQUILAE NO. 3¹

Eleven exposures were measured by both van Maanen and Sanford to derive a preliminary parallax of the Nova. The result is

$$\pi \text{ abs.} = +0''.060 \pm 0''.004$$

The first two exposures were taken on June 12, 1918, when the magnitude was +0.7; altho a double rotating sector was used at that time in order to cut down the brightness of the Nova, the exposures still show images of considerable size, about 6" in diameter. Using only the later exposures we can compute the parallax by adopting the proper motion that was derived by Trumpler; we then find $+0''.058 \pm 0''.007$.

Altho the parallax is still uncertain it seems worth while to compute the absolute magnitude of the Nova at different epochs. By accepting $+0''.060$ as parallax, the absolute magnitude at maximum was -2.4; now it is about +5, and, supposing that the apparent magnitude will diminish to 10.5, which was the value before the outburst, the absolute magnitude will be +9.4 at minimum. For the three Novae for which parallaxes are available (*Nova Persei* No. 2, *Nova Geminorum* No. 2, and *Nova Lacertae*), the mean absolute magnitudes are -2.9 and +6.9, respectively, at maximum and minimum, in good agreement with the results above.

On June 4, 1919, the Nova had the appearance of a very small planetary nebula, the disk being a little over 1" in diameter.

A. VAN MAANEN AND R. F. SANFORD.

NOTE ON THE RESULTS OF THE SEARCH FOR AN INTRA-MERCURIAL PLANET, ECLIPSE OF JUNE 8, 1918.

Two of the cameras of the Vulcan-Einstein apparatus employed at Goldendale, Washington, were directed about 4° east and west of the Sun in continuation of the search for an intra-Mercurial planet.

Fifty-eight stars were found on the two Einstein plates taken with the Sun central, limiting magnitude about 9.0 B. D. On the plate of the region to the west of the Sun sixty-five stars were found; a few of these were as faint as 9.0. But on the plate directed to the east of the eclipsed Sun only one star was found, and that at the very edge of the plate nearest to the Sun; clouds cut out all others. On this plate even a star as bright as magnitude 3.1 is invisible.

¹Read at the Pasadena meeting of the *Ast. Soc. Pac.* June 19, 1919.

The result of the search for an intra-Mercurial planet near the Sun at the eclipse of June 8, 1918, may then be summed up as follows: In an area approximately 5° wide, extending from 2° east to nearly 6° west of the Sun, there was found no suspicious object as bright as magnitude 8.5. The area just described represents quite accurately the size of the fortunate hole in the clouds thru which the eclipse was observed, as some cutting off is suspected at the outer corners of the western plate. HEBER D. CURTIS.

A PERIODIC TERM IN OBSERVATIONS OF RIGHT ASCENSION¹

Observations of a fundamental character made with the meridian circle at the Lick Observatory in the years 1905 to 1908 exhibit differences in the transits recorded by chronograph similar to those noted by Mr. Zimmer at Cordoba in 1917 and 1918.²

Our determination is based upon three sets of comparisons of clock corrections observed at various hours of the day and night, which may be combined in groups to show the relative difference between transits near sunrise and sunset. In the first set there are twenty comparisons of the results from two groups of stars differing twelve hours in right ascension, in which the observed correction from one group is compared with the correction interpolated from the observed corrections of the other group. The interpolation of the rate is for half a day in each case. These observations were made in 1905 and 1906, and from the same series there are thirty-six comparisons of the clock correction from *α Andromedae* with the corrections from the group of stars fourteen hours later. The Dent Sidereal clock (No. 4) was in use at that time.

The third series was made in continuous periods of observing of two days each, each period containing four groups of stars with six hours in a group, observed twice when possible. Mr. R. F. Sanford and I alternated in the observing of September and October, 1907, and April, 1908, the bad weather in the spring of 1908 having prevented the observations of a fourth period as planned. There are twelve comparisons in this series between groups of stars differing by twelve hours of right ascension. The Riefler clock (No. 5) was in service for these observations, running under constant

¹Abstract presented at the Pasadena meeting of the *Ast. Soc. Pac.*, June 19-20, 1919.

²*Astron. Jour.*, **22**, 1, 1919.